

## Storm Data and Unusual Weather Phenomena - July 2008

| Location                                                                                                                                                                                                                                                                                         | Date/Time          | Deaths & Injuries | Property & Crop Dmg | Event Type and Details               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|---------------------|--------------------------------------|
| <b>KANSAS, Southeast</b>                                                                                                                                                                                                                                                                         |                    |                   |                     |                                      |
| <b>SEDGWICK COUNTY --- 3.3 W WICHITA [37.71, -97.39]</b>                                                                                                                                                                                                                                         |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 14:52 CST |                   | 0                   | Hail (0.75 in)                       |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 14:52 CST |                   | 0                   | Source: Amateur Radio                |
| Penny size hail fell at 13th and West streets on the west side of Wichita.                                                                                                                                                                                                                       |                    |                   |                     |                                      |
| <b>CHASE COUNTY --- 0.5 W COTTONWOOD FALLS [38.37, -96.54]</b>                                                                                                                                                                                                                                   |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 15:53 CST |                   | 0                   | Thunderstorm Wind (EG 52 kt)         |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 15:53 CST |                   | 0                   | Source: Trained Spotter              |
| <b>CHASE COUNTY --- 3.5 N SAFFORDVILLE [38.43, -96.40]</b>                                                                                                                                                                                                                                       |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 15:58 CST |                   | 0                   | Hail (1.00 in)                       |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 15:58 CST |                   | 0                   | Source: Trained Spotter              |
| <b>CHASE COUNTY --- 0.5 W COTTONWOOD FALLS [38.37, -96.54]</b>                                                                                                                                                                                                                                   |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:04 CST |                   | 5K                  | Thunderstorm Wind (EG 56 kt)         |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:04 CST |                   | 0                   | Source: Trained Spotter              |
| Several large trees were blown down from high winds. Winds were estimated to be at least 65 mph.                                                                                                                                                                                                 |                    |                   |                     |                                      |
| <b>CHASE COUNTY --- 1.1 W ELMDALE [38.37, -96.65]</b>                                                                                                                                                                                                                                            |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:45 CST |                   | 5K                  | Thunderstorm Wind (EG 56 kt)         |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:45 CST |                   | 0                   | Source: Law Enforcement              |
| Several large trees were blown down from high winds. Winds were estimated at 65 mph.                                                                                                                                                                                                             |                    |                   |                     |                                      |
| <b>MARION COUNTY --- 0.7 S FLORENCE [38.24, -96.93]</b>                                                                                                                                                                                                                                          |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:50 CST |                   | 0                   | Hail (1.00 in)                       |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:50 CST |                   | 0                   | Source: Broadcast Media              |
| Pea to quarter sized hail occurred in Florence. KAKE news relayed this report.                                                                                                                                                                                                                   |                    |                   |                     |                                      |
| <b>CHASE COUNTY --- 0.5 W COTTONWOOD FALLS [38.37, -96.54]</b>                                                                                                                                                                                                                                   |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:57 CST |                   | 0                   | Thunderstorm Wind (EG 52 kt)         |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 16:57 CST |                   | 0                   | Source: Trained Spotter              |
| High winds picked up suddenly from the south.                                                                                                                                                                                                                                                    |                    |                   |                     |                                      |
| <b>CHASE COUNTY --- 3.8 ENE CEDAR PT [38.29, -96.75], 3.5 ENE CEDAR PT [38.29, -96.76], 1.1 WSW CEDAR PT [38.27, -96.84], 1.2 SSW CEDAR PT [38.26, -96.83], 2.0 E CEDAR PT [38.27, -96.78]</b>                                                                                                   |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 17:56 CST |                   | 35K                 | Flash Flood (due to Heavy Rain)      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 23:00 CST |                   | 0                   | Source: Law Enforcement              |
| Water was reported over highway 50 between mile marker 311 and 312. Several rural roads in the Cedar Point area were also closed due to high water over them.                                                                                                                                    |                    |                   |                     |                                      |
| <b>ELLSWORTH COUNTY --- 9.2 NNW CARNEIRO [38.86, -98.07]</b>                                                                                                                                                                                                                                     |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 19:42 CST |                   | 0                   | Hail (1.00 in)                       |
|                                                                                                                                                                                                                                                                                                  | 07/02/08 19:42 CST |                   | 0                   | Source: Amateur Radio                |
| A slowly moving cold front triggered several severe thunderstorms from Chase County into western Sedgwick County. Hail up to the size of quarters and wind gusts to 60 mph occurred with the storms. The slow moving storms also produced flooding in Chase County near the town of Cedar Point. |                    |                   |                     |                                      |
| <b>BARTON COUNTY --- 5.6 SE DUNDEE [38.26, -98.81], 5.6 SE DUNDEE [38.26, -98.80]</b>                                                                                                                                                                                                            |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                  | 07/08/08 17:27 CST |                   | 0                   | Tornado (EF0, L: 0.42 mi , W: 40 yd) |
|                                                                                                                                                                                                                                                                                                  | 07/08/08 17:28 CST |                   | 0                   | Source: Trained Spotter              |

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| Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Date/Time          | Deaths & Injuries | Property & Crop Dmg | Event Type and Details               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|---------------------|--------------------------------------|
| A brief touch down of a landspout tornado occurred in an open field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                   |                     |                                      |
| <b>BARTON COUNTY --- 2.3 ESE GREAT BEND ARPT [38.34, -98.81], 2.6 ESE GREAT BEND ARPT [38.34, -98.80]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/08/08 17:29 CST |                   | 0                   | Tornado (EF0, L: 0.31 mi , W: 40 yd) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/08/08 17:30 CST |                   | 0                   | Source: Trained Spotter              |
| A rope type landspout tornado was reported in an open field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                   |                     |                                      |
| <b>Showers and thunderstorms developed on an outflow boundary in Barton County producing two brief, landspout tornadoes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                   |                     |                                      |
| <b>CHASE COUNTY --- 4.9 E BAZAAR [38.27, -96.44], 5.2 E BAZAAR [38.27, -96.43]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/09/08 15:40 CST |                   | 0                   | Tornado (EF0, L: 0.37 mi , W: 40 yd) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/09/08 15:41 CST |                   | 0                   | Source: Law Enforcement              |
| A brief landspout tornado touched down in an open field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                   |                     |                                      |
| <b>CHASE COUNTY --- 6.5 E BAZAAR [38.26, -96.41], 6.8 E BAZAAR [38.26, -96.41]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/09/08 15:46 CST |                   | 0                   | Tornado (EF0, L: 0.29 mi , W: 40 yd) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/09/08 15:48 CST |                   | 0                   | Source: Trained Spotter              |
| A brief landspout tornado touched down in an open field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                   |                     |                                      |
| <b>Thunderstorms developed along a stationary front producing two brief, landspout tornadoes in Chase County.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                   |                     |                                      |
| <b>CHASE COUNTY --- 6.0 W ELMDALE [38.37, -96.74]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 16:00 CST |                   | 0                   | Hail (0.88 in)                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 16:00 CST |                   | 0                   | Source: Trained Spotter              |
| <b>LABETTE COUNTY --- 8.3 E PARSONS [37.34, -95.12]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 16:42 CST |                   | 0                   | Hail (0.75 in)                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 16:42 CST |                   | 0                   | Source: Public                       |
| The hail occurred on Highway 400 between mile markers 412 and 413.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                   |                     |                                      |
| <b>NEOSHO COUNTY --- 4.0 N GALESBURG [37.53, -95.34]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:32 CST |                   | 0                   | Hail (1.00 in)                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:32 CST |                   | 0                   | Source: Public                       |
| The hail occurred on Highway 47, 4 miles west of the Highway 59 and Highway 47 intersection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                   |                     |                                      |
| <b>NEOSHO COUNTY --- 0.6 W GALESBURG [37.47, -95.36]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:42 CST |                   | 0                   | Hail (0.88 in)                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:42 CST |                   | 0                   | Source: Law Enforcement              |
| <b>SEDGWICK COUNTY --- 3.7 NE VALLEY CENTER [37.87, -97.33]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:42 CST |                   | 0                   | Hail (1.00 in)                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:53 CST |                   | 0                   | Source: Emergency Manager            |
| Winds of 60 to 70 mph occurred with the hail, producing extensive damage. Refer to the "Thunderstorm Wind" entry for the same date, time and location for more details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                   |                     |                                      |
| <b>SEDGWICK COUNTY --- 4.3 NNE VALLEY CENTER [37.88, -97.33]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                   |                     |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:42 CST |                   | 0.25M               | Thunderstorm Wind (EG 65 kt)         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 07/22/08 17:53 CST | 2                 | 0                   | Source: Emergency Manager            |
| An isolated thunderstorm produced severe downburst winds along with hail up to quarter size along and near Interstate 135 roughly between 109th Street and 101st Street. Four semis traveling on the interstate were blown over, blocking traffic for several hours. Various power lines and trees were downed. Additionally, copious amounts of pea to quarter size hail pummeled the same location for several minutes, producing hail drifts up to 6 inches deep. The hail in tandem with the wind shattered dozens of vehicle windows, producing two minor injuries due to flying glass. Additionally, at a nearby residence, a garage roof was peeled off, and a camper suffered major damage from the wind and hail. |                    |                   |                     |                                      |

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| Location                                                                                                                                                                                                                                                                                                                                                                                                                                        | Date/Time          | Deaths & Injuries | Property & Crop Dmg | Event Type and Details         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|---------------------|--------------------------------|
| <b>MCPHERSON COUNTY --- 1.3 WSW LINDSBORG [38.57, -97.69]</b>                                                                                                                                                                                                                                                                                                                                                                                   |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/22/08 18:32 CST |                   | 0                   | Thunderstorm Wind (EG 52 kt)   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/22/08 18:32 CST |                   | 0                   | Source: Trained Spotter        |
| <b>SALINE COUNTY --- 4.3 WSW BRIDGEPORT [38.60, -97.67]</b>                                                                                                                                                                                                                                                                                                                                                                                     |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/22/08 18:42 CST |                   | 0                   | Thunderstorm Wind (EG 52 kt)   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/22/08 18:42 CST |                   | 0                   | Source: Law Enforcement        |
| One-half inch hail occurred with the wind.                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                   |                     |                                |
| <b>MARION COUNTY --- 0.7 S FLORENCE [38.24, -96.93]</b>                                                                                                                                                                                                                                                                                                                                                                                         |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/22/08 19:43 CST |                   | 0                   | Hail (1.50 in)                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/22/08 19:50 CST |                   | 0                   | Source: Fire Department/Rescue |
| Strong to severe thunderstorms developed along a weak frontal boundary across portions of central, south-central and southeast Kansas during the evening of July 22nd, ahead of a weak upper level disturbance approaching from the north. A rather isolated yet potent severe thunderstorm produced extensive damage across a relatively small area of northern Sedgwick county along Interstate 135.                                          |                    |                   |                     |                                |
| <b>BARTON COUNTY --- 3.0 NW GALATIA [38.66, -99.01]</b>                                                                                                                                                                                                                                                                                                                                                                                         |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/26/08 15:47 CST |                   | 0                   | Thunderstorm Wind (EG 56 kt)   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/26/08 15:47 CST |                   | 0                   | Source: Trained Spotter        |
| <b>SEDGWICK COUNTY --- 2.8 WNW GODDARD [37.68, -97.63]</b>                                                                                                                                                                                                                                                                                                                                                                                      |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/26/08 19:10 CST |                   | 0                   | Thunderstorm Wind (EG 52 kt)   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/26/08 19:10 CST |                   | 0                   | Source: Trained Spotter        |
| A cluster of strong to severe thunderstorms affected portions of central and south-central Kansas during the late afternoon and evening hours of July 26th. Damaging wind gusts of 60 to 65 mph and locally very heavy rainfall occurred.                                                                                                                                                                                                       |                    |                   |                     |                                |
| <b>SUMNER COUNTY --- 0.9 NE CORBIN [37.13, -97.54]</b>                                                                                                                                                                                                                                                                                                                                                                                          |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 16:55 CST |                   | 0                   | Hail (1.75 in)                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 16:55 CST |                   | 0                   | Source: Trained Spotter        |
| <b>SUMNER COUNTY --- 0.9 NE CORBIN [37.13, -97.54]</b>                                                                                                                                                                                                                                                                                                                                                                                          |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 17:15 CST |                   | 0                   | Hail (1.75 in)                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 17:15 CST |                   | 0                   | Source: Trained Spotter        |
| <b>SUMNER COUNTY --- 2.1 SSE CORBIN [37.09, -97.54]</b>                                                                                                                                                                                                                                                                                                                                                                                         |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 17:15 CST |                   | 0.15M               | Thunderstorm Wind (EG 61 kt)   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 17:15 CST |                   | 0                   | Source: Emergency Manager      |
| A combination of large hail and microburst straight-line winds caused extensive damage across south-central and southwest portions of Sumner County. At least two outbuildings, one of which was newly constructed, were heavily damaged. A residence sustained roof, siding and window damage, and a few vehicles sustained hail damage. Eight to ten power poles were snapped across the area, and five-inch diameter tree limbs were downed. |                    |                   |                     |                                |
| <b>SUMNER COUNTY --- 0.9 SE PERTH [37.16, -97.49]</b>                                                                                                                                                                                                                                                                                                                                                                                           |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 17:17 CST |                   | 0                   | Hail (1.00 in)                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/28/08 17:17 CST |                   | 0                   | Source: Trained Spotter        |
| Remnants of Hurricane Dolly approaching from the west resulted in an isolated severe thunderstorm across Sumner county during the evening of July 28th. Golfball size hail and winds up to 70 mph occurred, producing isolated extensive damage.                                                                                                                                                                                                |                    |                   |                     |                                |
| <b>ELK COUNTY --- 0.2 SSE LONGTON [37.38, -96.08], 5.4 S LONGTON [37.30, -96.08], 8.3 SE LONGTON [37.30, -95.97], 6.0 E LONGTON [37.38, -95.97]</b>                                                                                                                                                                                                                                                                                             |                    |                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/29/08 23:00 CST |                   | 0                   | Flood (due to Heavy Rain)      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 07/30/08 07:00 CST |                   | 0                   | Source: Law Enforcement        |

Highway 160 near Oak Valley was barricaded due to water over the road.

Areas of thunderstorms with heavy rain during the evening and overnight hours of July 29th produced localized relatively minor flooding across portions of southeast Kansas.

Storm Data and Unusual Weather Phenomena - July 2008

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|-----------|-------------------|---------------------|------------------------|
|----------|-----------|-------------------|---------------------|------------------------|